

Rule 1.26

AC
4/29/05

WHAT IS CLAIMED IS:

1. A magnetic head slider comprising a magnetic head for recording/reproducing information from/into a magnetic disk and a slider on which the magnetic head is mounted, wherein said slider has a first positive pressure generating portion provided at an air-inflow side and a positive pressure generating portion surface provided at an air-outflow side, projections being provided at the air-inflow side at positions with respect to said first positive pressure generating portion on a first surface which faces the magnetic disk upon read/write operation of the magnetic head slider.

2. A magnetic head slider according to claim 1, wherein said slider has a step surface provided at the air-inflow side with respect to said first positive pressure generating portion and having a level lower than said first positive pressure generating portion, and at least a negative pressure generation portion is provided at the air-outflow side and having a level lower than said step surface, said projections being provided on said step surface which is said first surface.

3. A magnetic head slider according to claim 2, wherein a difference in the levels of said positive pressure generating portion surface and said step surface is less than 300 nm.

4. A magnetic head slider according to claim 3, wherein a difference in the levels of said first positive pressure generating portion and said step surface is less than 200 nm.

5. A magnetic head slider according to claim 2, wherein said first positive pressure generating portion and said step surface constitute a flying pad.

6. A magnetic head slider according to claim 1, wherein said projections have a cylindrical shape and a diameter of 0.01-0.1 mm.

7. A magnetic head slider according to claim 1, wherein said projections have a planar end surface.

8. A magnetic head slider according to claim 1, wherein said projections have a curved end surface.

9. A magnetic head slider according to claim 2, wherein said first surface includes a central step surface provided at a center of said first positive pressure generating portion in a widthwise direction of the slider.

10. A magnetic head slider according to claim 9, wherein said central step surface has a level substantially the same as said step surface.

11. A magnetic head slider according to claim 1, wherein said second positive pressure generating portion is provided at a center in a widthwise direction of the slider.

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~~13~~. A magnetic head slider according to claim 1, wherein said projections are provided outside of said first positive pressure generating portion in a widthwise direction of the slider.

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~~14~~. A magnetic head slider according to claim 1, wherein said first positive pressure generating portion and said second positive pressure generating portion are separated by a third negative pressure generation portion having a level which is lower than a level of said first positive pressure generating portion and said second positive pressure generating portion.

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~~15~~. A magnetic disk apparatus comprising a magnetic head slider including a magnetic head for recording/reproducing information from/into a magnetic disk and a slider on which the magnetic head is mounted, wherein said slider has a first positive pressure generating portion provided at an air-inflow side and a second positive pressure generating portion

provided at an air-outflow side, projections being provided at the air-inflow side at positions with respect to said first positive pressure generating portion on a first surface which faces the magnetic disk upon read/write operation of the magnetic head slider.

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~~16~~. A magnetic disk apparatus according to claim 15, wherein said slider has a step surface provided at the air-inflow side with respect to said first positive pressure generating portion and having a level lower than said first positive pressure generating portion, and at least a negative pressure generation portion surface provided at the air-outflow side and having a level lower than said step surface, said projections being provided on said step surface which is said first surface.

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~~17~~. A magnetic disk apparatus according to claim 16, wherein a difference in the levels of said first positive pressure generating portion and said step surface is less than 300 nm.

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~~18~~. A magnetic disk apparatus according to claim 17, wherein a difference in the levels of said first positive pressure generating portion and said step surface is less than 200 nm.

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~~19~~. A magnetic disk apparatus according to claim 16,
wherein said first positive pressure generating portion and
said step surface constitute a flying pad.

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~~20~~. A magnetic disk apparatus according to claim 15,
wherein said projections have a cylindrical shape and a
diameter of 0.01-0.1 mm.

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~~21~~. A magnetic disk apparatus according to claim 15,
wherein said projections have a planar end surface.

²¹
~~22~~. A magnetic disk apparatus according to claim 15,
wherein said projections have a curved end surface.

²²
~~23~~. A magnetic disk apparatus according to claim 16,
wherein said first surface includes a central step surface
provided at a center of the first positive pressure generating
portion in a widthwise direction of the slider.

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~~24~~. A magnetic disk apparatus according to claim 23,
wherein said central step surface has a level substantially
the same as said step surface.

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~~25~~. A magnetic disk apparatus according to claim 15,
wherein said second positive pressure generating portion is
provided at a center in a widthwise direction of the slider.

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~~26~~. A magnetic disk apparatus according to claim 15, wherein said projections are provided outside of the first positive pressure generating portion in a widthwise direction of the slider.

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~~27~~. A magnetic disk apparatus according to claim 15, wherein said first positive pressure generating portion and said second positive pressure generating portion are separated by a third negative pressure generation portion having a level which is lower than a level of said first positive pressure generating portion and said second positive pressure generating portion.